

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Revision of the Commission's Rules to)	CC Docket No. 94-102
Ensure Compatibility With Enhanced 911)	
Emergency Calling Systems)	
)	
Amendment of Parts 2 and 25 to Implement)	IB Docket No. 99-67
the Global Mobile Personal Communications)	
by Satellite (GMPCS) Memorandum of)	
Understanding and Arrangements; Petition of)	
the National Telecommunications and)	
Information Administration to Amend Part 25)	
of the Commission's Rules to Establish)	
Emissions Limits for Mobile and Portable)	
Earth Stations Operating in the 1610-1600.6)	
MHz Band)	

REPLY COMMENTS OF VONAGE HOLDINGS CORP.

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REPLY COMMENTS OF VONAGE HOLDINGS CORP.

Vonage Holdings Corp. ("Vonage"), by its undersigned counsel and pursuant to the Federal Communications Commission ("FCC" or "Commission") Further Notice of Proposed Rulemaking released on December 20, 2002,¹ respectfully submits the following reply to the initial comments filed in the above-captioned proceeding.

INTRODUCTION AND SUMMARY

Vonage is a leading provider of digital voice over Internet Protocol (VoIP) enhanced services over existing high-speed internet connections. Vonage Digital Voicesm provides consumers with high quality, feature-rich and cost effective enhanced internet protocol ("IP") communications services through any broadband connection using a standard or IP phone.

¹ *Revision of the Commission's Rules to ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, *Further Notice of Proposed Rulemaking* (rel. December 20, 2002)(*"FNPRM"*).

Vonage also offers a wholesale services product. As such, Vonage's reply comments are directed at those commenters who addressed issues raised by the Commission with respect to the development and implementation of basic and enhanced 911 ("E911") capabilities by emerging services and devices, including those utilizing new technological platforms, such as voice over IP ("VoIP").²

Vonage strongly concurs with the Commission's recognition of "the many benefits that new technologies bring to the public in terms of increased access and opportunities for all Americans" as well as the Commission's stated goals of "continu[ing] to encourage the development of these capabilities, while also enhancing public safety."³ Vonage voluntarily has expended and continues to expend considerable effort and resources to develop 911/E911 capabilities adaptable to the technical complexities of Vonage's innovative service offerings. In fact, Vonage is pleased to advise the Commission that Vonage will shortly begin implementing certain 911/E911-type capabilities with its service offerings. Vonage's experience in seeking to develop 911/E911-type solutions adaptable to new technology platforms, emerging services and devices, such as those deploying VoIP-based technologies, leads us to suggest that the Commission can best encourage the development and deployment of such capabilities by providers of enhanced and emerging services and devices, by assuring that providers of enhanced services have access to the incumbent local exchange carrier ("ILEC") facilities they need in order to provide 911/E-911 services.

² *FNPRM*, at ¶¶ 2, 111-115.

³ *Id.*, at ¶ 113.

DISCUSSION

I. VONAGE CONCURS THAT THERE ARE TECHNICAL AND OPERATIONAL ISSUES TO BE OVERCOME IN DEVELOPING AND IMPLEMENTING 911/E911 CAPABILITIES FOR VOIP-BASED TECHNOLOGIES AND OTHER EMERGING SERVICES AND DEVICES

Vonage concurs with those commenters who point to “the technical and administrative complexities surrounding the delivery of 911 calls from new and emerging services and devices.”⁴ As a general matter, the development and implementation of 911/E911 capabilities for emerging services and devices is hindered by the state of existing 911 wireline infrastructure, which Dale Hatfield concludes, in his independent technical report to the FCC, is “seriously antiquated . . . a platform or foundation that has serious limitations in terms of speed, scalability, and adaptability.”⁵ The Hatfield Report correctly determined that the limitations inherent in the antiquated 911 infrastructure will “constrain our ability to extend E911 access to a rapidly growing number of non-traditional devices (e.g., PDAs), systems (e.g., telematics) and networks (e.g., voice networks that employ Voice-over-the-Internet Protocol -- VoIP).”⁶ As such, we agree with commenters who have found that “[d]ue to the technical limitations of the 911 network, the flexibility of the current network is limited in its ability to accept new technologies.”⁷ Moreover, with respect to providers of VoIP-based services such as Vonage, the Commission itself aptly cites from the Hatfield Report, that there are numerous “potential technical issues that may arise with voice delivered using the Internet Protocol (VOIP)

⁴ Comments of Intrado Inc., at p. 5, 12; *see also*, Comments of The Boulder Regional Emergency Telephone Service Authority (“BRETSA”) (recognizing technical difficulties and complexities in implementation of 911 capabilities for VoIP applications).

⁵ Dale N. Hatfield, *A report on Technical and Operational Issues Impacting the Provision of Wireless Enhanced E911 Services*, Public Notice, DA 02-2666 (“Hatfield Report”), at ii.

⁶ *Id.*

⁷ Comments of Intrado Inc., at 5.

communicating the necessary call-back and location information to PSAPs.”⁸ Vonage has been struggling with these issues, among others, in seeking to develop 911/E911 technical solutions. Finally, as discussed in detail in Section III below, there are technical and other issues with respect to access to critical ILEC-controlled 911/E911 facilities by enhanced service providers.

In addition, numerous commenters have noted the significant complexity in the regulatory issue of the potential applicability of 911 requirements to VoIP and other emerging technologies.⁹ In this regard, Vonage agrees with commenters who believe that the marketplace provides strong incentives to encourage enhanced service providers to develop technical 911/E911 solutions applicable to their respective varied technologies and applications, as Vonage is doing.¹⁰

II. VONAGE IS ACTIVELY WORKING ON DEVELOPING 911/E911 TECHNICAL AND OPERATIONAL SOLUTIONS AND WILL SOON BEGIN IMPLEMENTATION OF CERTAIN 911/E911-TYPE CAPABILITIES

Working with its technical partners, Vonage has devoted and continues to devote substantial resources towards implementation of 911/E911-type capabilities as part of its service offerings. At present, Vonage envisions a three-step phased-in approach to implementing these capabilities. Vonage is pleased to advise the Commission that intends to implement certain 911-type capabilities with a short-term solution that it will deploy beginning in April 2003. Vonage is also actively working on developing the next tier, intermediate solution that will encompass callback and location functions akin to E911. The timetable for implementation of the intermediate-term solution depends in critical part, however, upon the ability of Vonage to access certain 911/E911 enabling facilities, such as 911 trunks, selective routers and databases

⁸ *FNPRM* at ¶ 113 (*citing* Hatfield Report, at 6.); *see also*, Comments of the Cellular Telecommunications & Internet Association (“CTIA”).

⁹ *See e.g.*, Reply Comments of Net2Phone Inc.; Comments of CTIA; Comments of the Intelligent Transportation Society of America (“ITSA”).

¹⁰ *See*, Comments of WorldCom; Reply Comments of Net2phone, at ¶¶ 3-4.

that are controlled by the ILECs. In turn, Vonage envisions a long-term solution that is adaptable and expandable to include even broader functionalities once Public Safety Answering Point (“PSAP”) and the legacy 911 infrastructure are capable of receiving and using E-911 information over data networks and IP-based technology platforms. In fact, Vonage suggests to the Commission that facilitating access to 911 facilities for providers of enhanced and emerging services and devices will likely spawn even more advanced technological innovations in the field of emergency services, further advancing the Commission’s public safety objectives.

Vonage briefly describes its solutions and some of the technical issues it is confronting as it seeks to deploy 911/E911-type capabilities. The short-term solution requires Vonage customers who seek to enable 911-type service, to submit their physical address information to Vonage. The address is then matched with the closet PSAP for routing of the call in the event the customer seeks to dial emergency services. The calls are routed over the Vonage network, and then over the PSTN to the general phone number at the PSAP. The call is not routed over the same dedicated 911 trunks to the dispatchers who receive emergency calls using traditional 911 dialing, potentially raising network congestion or response time issues. In addition, as noted above, there are technical limitations that restrict the transmission and receipt of automated callback and location information. Other commenters have noted the public safety concerns inherent in these technical limitations.¹¹ Vonage’s intermediate-term solution envisions access to the ILEC 911 trunks, selective routers, and interfaces to databases to allow for priority routing over 911 trunks and transmission of automated callback and location information. Vonage is eager to implement this E911-equivalent solution, with its greater public safety benefits, once ILECs provide access to their 911 facilities, and carry out the minor modification to the selective routers necessary to provide PSAP access to Vonage customer data. Such minor modification is

¹¹ See e.g., Reply Comments of Net2Phone Inc., at 6; Comments of Intrado.

similar to the type of modification that ILECs regularly carry out for requesting competitive local exchange carriers. Finally, as mentioned above, Vonage envisions a third level of capabilities once PSAPs and the 911 legacy infrastructure are capable of receiving and using E-911 information over data networks and IP-based technology platforms.

III. THE COMMISSION SHOULD REQUIRE ILECS TO PROVIDE ACCESS TO FACILITIES NECESSARY FOR THE PROVISION OF 911/E911 SERVICES IN ORDER TO FACILITATE DEVELOPMENT OF 911/E911 CAPABILITIES BY PROVIDERS OF ENHANCED AND EMERGING SERVICES AND DEVICES

The Commission seeks comment on what role it can play in encouraging emerging services and devices, that likewise will serve to advance public safety concerns.¹² Vonage believes that the FCC can best further these laudable goals by making sure that providers of enhanced and other emerging services and devices have access to the 911/E911-related facilities and databases they need to be able to develop reliable and innovative solutions to overcome the technical hurdles to the provision of 911/E911 capabilities by such new technologies.

Specifically, Vonage and other providers of enhanced and emerging services, products and technological platforms need access to 911/E911-related facilities such as ILEC 911 trunks, selective routers and databases, that are under the exclusive control of the ILECs, in order to be able to develop and implement workable, reliable solutions. The Hatfield Report recognized the “vital role” played by the ILECs given that “[t]he ILECs essentially stand between the wireless carrier and the PSAP.”¹³ In identical fashion, the ILECs stand between providers of enhanced services and devices and the PSAPs. Specifically, the Hatfield Report concluded that “[a]s the dominant providers of wireline E911 systems in the U.S., [the ILECs] directly or indirectly control the Selective Routers, ALI data bases, trunks and other facilities necessary to deliver the [] emergency call and associated callback number and location information to the appropriate

¹² See *FNPRM*, at ¶¶ 111-115.

¹³ Hatfield Report, at 32.

PSAP.” Providers of enhanced and emerging services, such as Vonage, require access to these facilities in order to be able to fully implement E911-equivalent solutions. Vonage requires access to ILEC emergency services facilities, such as the 911 trunks, selective routers, and interfaces to databases in order to be able to implement the intermediate-term solution described above in Section II.

Vonage urges the Commission to make it clear that ILECs must provide timely access to 911/E911 facilities to providers of enhanced services, notwithstanding that providers of enhanced services generally are not regulated in the same fashion as telecommunications carriers by the FCC or state regulatory commissions. Confirming ILEC responsibility to provide access to these emergency facilities to enhanced providers will clearly promote the Commission’s important public safety goals, while encouraging innovative technical solutions, new technologies and devices to better address public safety needs. The Hatfield Report concludes that although “ILECs play a critical role in the deployment of wireless E911 service in the reliable and seamless manner contemplated by Congress . . . their responsibilities for supporting wireless E911 deployment were not well defined.”¹⁴ Vonage urges the Commission to take this opportunity to define ILEC responsibilities with respect to deployment of 911/E911 by enhanced service providers by making it clear that ILECs must make 911/E911 enabling facilities available in a timely manner to enhanced services providers, and others.

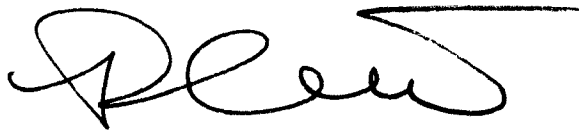
CONCLUSION

Vonage supports the Commission’s goals of enhancing public safety while continuing to foster growth of emerging technologies, services and products. For the reasons stated herein, Vonage urges the Commission to foster these goals by requiring ILECs to provide timely access to ILEC 911/E911 facilities, such as trunks, selective routers and databases, in order to facilitate

¹⁴ Hatfield Report, at iii.

development of 911/E911 capabilities by providers of enhanced and emerging services and products. Finally, Vonage urges the Commission to recognize the technical complexities and hurdles inherent in developing and implementing 911/E911 capabilities for VoIP-based technologies and other emerging services and devices, and to maintain the flexibility that will encourage innovative solutions.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'W. Wilhelm', with a long horizontal flourish extending to the right.

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